

CLAIMS

What is claimed is:

1. A rotary device for a horizontal injection molding machine, comprising a base plate supported on a machine bed of a horizontal injection molding machine; a rotary table supported on the base plate for rotation about a vertical rotation axis, and drive means for rotating the rotary table.
2. The rotary device of claim 1, wherein the base plate has a substantially H-shaped configuration defining a lateral leg placed on the machine bed.
3. The rotary device of claim 1, wherein base plate has a center of gravity, said rotation axis extending through the center of gravity of the base plate.
4. The rotary device of claim 1, and further comprising guide means selected from the group consisting of linear guide and slideways for slideably supporting the base plate.
5. The rotary device of claim 1, wherein the base plate is disposed between confronting mold mounting plates of a mold of the injection molding machine, and so sized as to be spaced from the mold mounting plates at a small distance, when the mold is closed.

6. The rotary device of claim 1, wherein the base plate is disposed between confronting mold mounting plates of a mold of the injection molding machine, and so sized as to project underneath the mold mounting plates into an area outside of the mold mounting plates, when the mold is closed.
7. The rotary device of claim 1, wherein the base plate is disposed between confronting mold mounting plates of a mold of the injection molding machine, and further comprising shifting means, connecting the base plate to the mold mounting plates, for displacing the base plate in a longitudinal direction, said shifting means including a member selected from the group consisting of a rack, a spindles, a steep-threaded spindle, and a hydraulic cylinder.
8. The rotary device of claim 1, and further comprising guide means selected from the group consisting of linear guide and slideways for so supporting the base plate upon the machine bed as to prevent tilting.
9. The rotary device of claim 1, wherein the drive means includes a ring gear mounted to the rotary table and a motor, selected from the group consisting of electric motor and hydraulic motor, for driving a gear in mesh with the ring gear on the rotary table.

10. The rotary device of claim 9, wherein the drive means includes a pivot pin extending downwards from the rotary table and projecting through the base plate.
11. The rotary device of claim 10, and further comprising a stator disposed underneath the base plate, said pivot pin being rotatably supported in the base plate and the stator.
12. A horizontal injection molding machine, comprising:
 - a machine bed defining a longitudinal axis;
 - a first mold mounting plate fixedly secured onto the machine bed and carrying a mold portion;
 - a second mold mounting plate adapted for traveling relative to the first mold mounting plate and carrying a mold portion;
 - a rotary device arranged between the first and second mold mounting plates and including a base plate supported on the machine bed, a rotary table supported on the base plate for rotation about a vertical axis, and drive means for rotating the rotary table; and
 - shifting means for displacing the rotary device in a direction parallel to the longitudinal axis.

13. The horizontal injection molding machine of claim 12, wherein the shifting means so couple the rotary device to the first and second mold mounting plates that a travel of the second mold mounting plate is followed by a movement of the rotary device, said shifting means including a member selected from the group consisting of a rack, a spindles, a steep-threaded spindle, and a hydraulic cylinder.
14. The horizontal injection molding machine of claim 12, wherein the shifting means so interact with the rotary device that the rotary device is displaceable separately from the second mold mounting plate in parallel relationship to the longitudinal axis.
15. The horizontal injection molding machine of claim 12, wherein the shifting means includes a hydraulic cylinder unit.
16. The horizontal injection molding machine of claim 12 being a stack mold with a center part disposed between the first and second mold mounting plates, and secured to the rotary table, with the center part being a member selected from the group consisting of center platen and prismatic mold carrier.

17. The horizontal injection molding machine of claim 12, wherein base plate has a substantially H-shaped configuration defining parallel legs interconnected by a crosspiece, said crosspiece and said rotary table being so configured that a molded article is able to drop downwards into a free space between the legs of the base plate.
18. The horizontal injection molding machine of claim 16, and further comprising at least one ring bolt mounted to at least one of an upper side of the center part, the mold portion attached on the first mold mounting plate, and the mold portion attached on the second mold mounting plate.
19. The horizontal injection molding machine of claim 16, and further comprising at least one transport bracket provided on an upper side across the stack mold for allowing the entire stack mold as a unit to be assembled and disassembled.
20. The horizontal injection molding machine of claim 16, and further comprising centering means for centering the center part on the rotary table.
21. The horizontal injection molding machine of claim 16, and further comprising attachment means for securing the center part on the rotary table.

22. The horizontal injection molding machine of claim 16, and further comprising means for transmission of media between the center part and the rotary table.
23. The horizontal injection molding machine of claim 22, wherein the media includes an element selected from the group consisting of water, oil, air, and electric signals.
24. The horizontal injection molding machine of claim 12, wherein the rotary table is provided with retention means for holding a molded article, produced between the mold portions of the first and second mold mounting plates.
25. The horizontal injection molding machine of claim 12, wherein the retention means includes an element selected from the group consisting of holding strip and holding frame.
26. The horizontal injection molding machine of claim 16, wherein the center part defines with one mold portion a partition plane and with the other mold portion a partition plane, and further comprising at least two hydraulic release cylinders provided in an area of each of the partition planes.
27. The horizontal injection molding machine of claim 26, wherein four hydraulic release cylinders are provided in the area of each of the partition planes.

28. The horizontal injection molding machine of claim 12, and further comprising different guides for guiding the base plate and the first and second mold mounting plates.